EPSHTEYN, S.S., inzh.

Using aircraft gas-turbine units for peak electric-power stations.
Energomashinostroenie 9 no.7:45-48 Jl '63. (MIRA 16:7)

(Gas turbines) (Electric power plants)

YAKOVLEV, S.A.; APUKHTIN, N.I.; BOCH, S.G.; VOZNESENSKIY, D.V.; GROMOV, V.I.; ZHUKOV, M.M.; KRASNOV, I.I.; LUNGERSGAUZEN, G.F.; PERKONS, V.A.; POKROVSKAYA, I.M.; RUDOVITS, Yu.L. [deceased]; SEMENOVA, A.S.; SHARKOV, V.V.; EPSHTEYN, S.V.; YAKOVLEVA, S.V.; VERSTAK, G. V. redaktor; GUROV, U.A., tekhnicheskiy redaktor.

[Methodical aid for studying and geological surveying of quarternary deposits; description of methods] Metodicheskoe rukovodstvo po izucheniiu i geologicheskoi s"emke chetvertichnykh otlozhenii; opisanie metodov. Sost.S.A.Iakovlev. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, 1955. 485 p. [Microfilm] (MLRA 9:1)

1. Leningrad. Vsesoyuznyy geologicheskii institut. (Geological surveys) (Geology, Stratigraphic--Quaternary--Study and teaching)

EPSHTEYN, S. V.

"Conference on Geomorphological Cartography," Iz. Ak. Nauk SSSR, Ser. Geograf., No.4, pp. 163-67, 1956

Translation U-3,053,306, 29 Jan 57

EPSHTEYN, S.V.

APUKHTIN, N.I.; BOGRETSOVA, T.B.; BOCH, S.G. [deceased]; GENESHIN, G.S.; GOLUBEVA, L.V.; GROMOV, V.I.; KRASNOV, I.I.; MIKHAYLOV, B.M.; NIKIFOROVA, K.V.; NIKOLAYEV, N.I.; POKROVSKAYA, I.M.; POPOV, V.V.; PRINTS, R.N.; RAVSKIY, E.I.; SHANTSER, Ye.V.; EPSHTEYN, S.V.; YAKOVLEVA, S.V.; FEODOT'YEV, K.M., redaktor izdatel'stva; KASHINA, P.S., tekhnicheskiy redaktor

[Concise field manual for a comprehensive geological survey of the Quaternary] Kratkoe polevoe rukovodstvo po kompleksnoi geologicheskoi s"emke chetvertichnykh otlozhenii. Sost. N.I.Apukhtin i dr. Moskva, 1957. 201 p. (MLRA 10:9)

1. Akademiya nauk SSSR. Geologicheskiy institut. 2. Moskovskiy geologo-razvedochnyy institut (for Shantser). 3. Geologicheskiy institut Akademii nauk SSSR (for Nikiforova, Ravskiy, Golubeva) 3. Vsesoyuznyy Nauchno-issledovatel'skiy geologicheskiy institut Ministerstva geologii i okhrany nedr SSSR (for Ganeshin, Bogretsova, Mikhaylov). 4. Voyenno-inzhenernaya akademiya im. Kuybysheva (for Popov). 5. Trest "Mosgeolnerud" (for Prints). 6. Severo-Zapadnoye geologicheskoye upravleniye (for Apukhtin)
(Geology, Stratigraphic)

SHUL'TS, S.S.; EPSHTEYN, S.V.

Geomorphological surveying and surveying of Quaternary sediments in the combined all-Union geological mapping operations. Mat. VSEGEI. Chet. geol. i geomorf. no.2:72-76 '59. (MIRA 14:5)
(Geological surveys)

3(5) SOV/10-59-2-22/29

AUTHOR: Epshteyn S.V.

TITLE: An Account of the Activity of the Permanent Interdepartmental Geomorphological Commission from 1956 to 1958.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 2, pp 147-152 (USSR)

ABSTRACT: The Postoyannaya mezhduvedomstvennaya geomorfologicheskaya komissiya (Permanent Interdepartmental Geomorphological Commission) was organized in accordance with the decision of the Interdepartmental Conference for Geomorphological Mapping convoked by order of the Ministry of Geology and Conservation of Minerals, for the development of uniform principles for geomorphological mapping. The development of such principles has been the main task of the commission from 1956 to 1958. Originally 12 scientific institutions - 9 in Moscow

Card 1/3

An Account of the Activity of the Permanent Interdepartmental Geomorphological Commission From 1956 to 1958

and 3 in Leningrad - were represented in the staff of the commission. In March 1958, a representative of the Institut geologicheskikh nauk AN USSR (Institute of Geological Sciences of the AS of the UkrSSR) was also included (for a complete list of the institutions and their representatives, see ref.2). The work of the commission was carried out at plenary sessions and at the sessions of the Moscow and Leningrad groups of the members of the commission. The guidance of the Moscow group was with the acting president of the commission, B.A. Fedorovich. The Leningrad group and the commission as a whole worked under the guidance of the president of the commission, S.S. Shul'ts. The work of the commission has led to the following results: 1) A project of taconometric classification of the basic morphogenetic categories has been developed. The rationality of its principles is proved by the

An Account of the Activity of the Permanent Interdepartmental Geomorphological Commission From 1956 to 1958.

fact that is was already used before its publication for a number of geomorphological and geological works. 2) The discussion about a unified system of conventional designations for geomorphological maps have shown, that none of the proposed systems measures up to the requirements. It will be necessary to develop and examine further systems. 3) The work of the commission has led to a close contact and collaboration of many geomorphologists of Moscow and Leningrad, which will result in a further development of Soviet geomorphology. The author hopes that the commission, which should be reorganized on a larger basis, will be incorporated into the AS USSR. There is 1 appendix (project of a taxonometric classification of the basic morphogenetic relief categories) and 2 Soviet references.

Card 3/3

BOYTSOVA, Ye.P.; VITTENBURG, P.V.; GANESHIN, G.S.,; GROMOV, V.I.,; ZUBAKOV, V.A.; IVANOVA, I.K.; KRASNOV, I.I.; LUNGERSGAUZEN, G.F.,; NIKIFOROVA, K.V.; POKROVSKAYA, I.M.; CHEMEKOV, Yu.F.; EPSHTEYN, S.Y.; YAKOVLEVA, S.V.

Sergei Aleksandrovich IAkovlev; obituary. Biul.Kom.chetv.per. no.23:97-101 '59. (MIRA 13:5)
(IAkovlev, Sergei Aleksandrovich, 1879-1957)
(Geology)

GANESHIN, G.S.; KORNUTOVA, Ye.I.; KRASNOV, I.I.; CHEMEKOV, Yu.F.; EPSHTEYN, S.Y.; YAKOVLEVA, S.V.

Map of Quaternary sediments of the U.S.S.R. Izv. AN SSSR. Ser. geog. no. 4:14-24 Jl-Ag '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Geology, Stratigraphic--Maps)

GANESHIN, G.S.; ZUBAKOV, V.A.; POKROVSKAYA, I.M.; SELIVERSTOV, Yu.P.; CHEMEKOV, Yu.F.; EPSHTEYN, S.Y.; YAKOVLEVA, S.V.

Scale, content, and terminology of stratigraphic subdivisions of the Quaternary system. Sov. geol. 4 no.8:3-15 Ag '61. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.

(Geology, Stratographic)

ACC NR: AT6022489 (A) SOURCE CODE: UR/0000/65/000/000/0009/0018

AUTHOR: Epshteyn, S. V.

ORG: none

TITLE: Proposal for standard legends for geomorphological survey maps

SOURCE: AN SSSR. Otdeleniye nauk o Zemle. Geomorfologicheskaya komissiya. Metodika geomorfologicheskogo kartirovaniya (Methods of geomorphological mapping). Moscow, Izd-vo Nauka, 1965, 9-18

TOPIC TAGS: geomorphology, cartography, topography

ABSTRACT: The paper reviews the principles of labeling geomorphological maps and prescribes the contents of the legends. On detailed maps, e. g., with scales up to 1:10,000, slopes are divided into their elemental surfaces and transitions such elemental surfaces are shown as their edges. On more generalized maps, elemental surfaces may be combined into groups according to some common features, e. g., age or origin. The Committee on Geology and Geomorphology of the Quaternary has proposed that three groups of symbols or markings be employed: topography, distinctness of color, and the density of color. The elemental surfaces on which the terrain surface may be resolved can be grouped into four categories: a) surfaces developed as the result of endogenous processes; b) surfaces due to exogenous processes; c) surfaces due to both endogenous and

L 09234-67
ACC NR: AT6022489

exogenous processes; and d) surfaces produced or modified by man's activity.

SUB CODE: 08/ SUBM DATE: 25Sep65/ ORIG REF: 007

EPSHTEYN, S.Ya.; BOREL', A.Ya.

Spontaneous rupture of the stomach. Vest.khir. 75 no.3:125 Ap '55. (MLRA 8:7)

1. Iz kliniki obshchey khirurgii Minskogo meditsinskogo instituta.
(STOMACH--ULCERS)

EPSHTEYN S.YA.

GREYMAN, A.A., dotsent; EPSTEYN, S.Ya., kandidat med.nauk

Traumatic diaphragmatic hernia. Zdrav. Belor. 6 no.3:60 Mr. '60.
(MIRA 13:5)

1. Iz propedevticheskoy khirurgicheskoy kliniki (i.o. zaveduyushchego - dotsent A.A. Greyman) Minskogo meditsinskogo instituta.
(DIAPHRAGM--HERNIA)

EPSHTEYN, S.Ya.; MADORSKIY, I.L.

Perforation of the appendix by a fish bone. Zdrav. Bel. 7 no.8: 61 Ag '61. (MIRA 15:2)

1. Iz kafedry obshchey khirurgii (zav. - zasluzhennyy deyatel' nauki prof. T.Ye.Gnilorybov) iz 3 klinicheskoy bol'nitsy (glavnyy vrach A.I. Korkhov).

(APPENDIX (ANATOMY)—FOREIGN BODIES)

EPSHTEYN, S.Ya.; GRISHIN, I.N.; BORISEVICH, Ye.B.

Suture of a heart wound with the patient in a terminal state.
Zdrav.Bel. 8 no.7:75 Jl '62. (MIRA 15:11)

1. Iz kafedry obshchey khirurgii (zav. - zasluzhennyy deyatel' nauki UkrSSR prof. T.Ye.Gnilorybov).
(HEART—WOUNDS AND INJURIES)

EPSHTEYN, S.Ya; KAZACHENOK, V.M.

Partial gigantism of the toes. Zdrav.Bel.9 no.2:70-71 F'63.
(MIRA 16:7)

1. Kafedry obshchey khirurgii (zaveduyushchiy - zasluzhennyy deyatel' nauki UkrSSR prof. T.Ye. Gnilorybov) Minskogo meditsinskogo instituta.

(TOES--ABNORMITIES AND DEFORMITIES)

GORLOVSKIY, I.A.; AYZENBERG, Ye. S. [deceased]; VEDENOV, G.N.; ZHIGAREV, S.K.; SHAPIRO, I.S.; EPSHTEYN, S.Z.

Technology of the production of ultramarine. Lakokras. mat. i ikh prim. no.3:20-25 '61. (MIRA 14:6)
(Ultramarine)

EPSHTEYN, TS.A.; KAPLAN, D.A.; RUTSHTEYN, P.V.; TOROPOVA, M.N.

Diagnosis and treatment of multiple sclerosis. Vest. AMN SSSR 16 no.6:53-57 '61. (MIRA 15:1)

1. TSentral'naya psikhonevrologicheskaya i neyrokhirurgicheskaya bol'nitsa Ministerstva putey soobshcheniya.
(MULTIPLE SCLEROSIS) (ENCEPHALOMYELITIS)

KORENBLIT, R.S.; MARKOVA, L.A.; RUTSHTEYN, P.V.; EPSHTEYN, TS.A.

Comparative study of the methods of diagnosis of acute encephalomyelitis and multiple sclerosis. Vest. AMN SSSR 16 no.6:61-64 '61. (MIRA 15:1)

1. TSentral'naya psikhonevrologicheskaya bol'nitsa Ministerstva putey soobshcheniya i Institut vaktsin i syvorotok, Khar'kov.
(MULTIPLE SCLEROSIS) (ENCEPHALOMYELITIS)

SHOGAM, S.M.; ORLOV, V.I.; EPSHTEYN, T.B.; SIDOROVA, S.V.; FEN'KOVA, I.Ye.

Fillers for insecticidal dusts and methods of studying them.
[Trudy] NIUIF no.165:36-45 '59. (MIRA 13:8)
(Insecticides)

S.[illegible], S.N., kand.khimicheskikh nauk; FEN'KOVA, Ye.I.; [illegible], I.A.; EPSHTEYN, T.B.

Insecticide powders, duts and granulated insecticides. Zhur. VKHO 5 no. 3:312-317 '60. (MIRA 14:2)
(Insecticides)

SHOGAM, S.M.; FEN'KOVA, Ye.I.; EPSHTEYN, T.B.

Physicochemical methods for determining the γ-isomer of hexachlorocyclohexane in various preparations. [Trudy] NIUIF no.164:35-36 '59. (MIRA 15:5)

(Benzene hexachloride)

EPSHTEYN, T.D., prof. (Kazan')

In memory of Professor V.I. Katerov. Kaz. med. zhur. no. 4:104 Jl-Ag '60. (MIRA 13:8)
(KATEROV, VASILII IVANOVICH, 1891-1960)

EPSHTEYN, T. D.

EPSTEYN, T.D., prof.

Basic data on the natural movement and morbidity of the population of the Tatar A.S.S.R. from 1910 to 1960. Kaz. med. zhur. no.1:81-87 Ja-F '62. (MIRA 15:3)

1. Zav. kafedroy organizatsii zdravookhraneniya i istorii meditsiny Kazanskogo meditsinskogo instituta.
(TATAR A.S.S.R.--STATISTICS, VITAL)

KREPKOGORSKIY, L.N., otv. red.; EPSHTEYN, T.D., red.; MUKHUTDINOV, I.Z., red.; STANKEVICH, Ye.F., red.; PETUKHOV, N.I., red.; OVRUTSKIY, G.D., red.

[Transactions of the Conference on Problems in Studying the Water Resources of the Tatar A.S.S.R. and the Hygiene of Water Supply] Trudy Nauchnoi konferentsii po voprosam izucheniia vodnykh resursov TASSR i gigieny vodosnabzheniia. Kazan', Kazanskii in-t usovershenstvovaniia vrachei im. V.I.Lenina, 1964. 106 p. (MIRA 18:5)

1. Nauchnaya konferentsiya po voprosam izucheniya vodnykh resursov TASSR i gigiyeny vodosnabzheniya, Kazan', 1963. 2. Kazanskiy Gosudarstvennyy institut dlya usovershenstvovaniya vrachey im. S.M.Kirova (for Krepkogorskiy). 3. Zaveduyushchiy Kafedroy terapevticheskoy stomatologii Kazanskogo meditsinskogo instituta (for Ovrutskiy). 4. Geologicheskiy institut AN SSSR, gorod Kazan' (for Stankevich). 5. Kafedra obshchey gigiyeny Kazanskogo Meditsinskogo instituta (for Petukhov).

EPSHTEYN, T.D.

Fundamental indicators of the population's health in the Tatar A.S.S.R. in half a century (1913-1963). Nauch. trudy Kaz. gos. med. inst. 14:61-63 '64. (MIRA 18:9)

1. Kafedra organizatsii zdravookhraneniya s istoriyey meditsiny (zav. - prof. T.D.Epshteyn) Kazanskogo meditsinskogo instituta.

EPSHTEYN, T. G.

EPSHTEYN, T. G.: "Investigation of the process of mechanized assembly of frames with flat pins." Min Higher Education USSR. Moscow Forestry Engineering Inst. Moscow, 1956
(Dissertation for the Degree of Candidate in Techincal Science.)

Knizhnaya letopis', No. 30, 1956. Moscow

EPSHTEYN, T.G.; PETROVSKAYA, M.N., red.; BEL'CHENKO, N.I., red. izd-va,; BACHURINA, A.M., tekhn. red.

[Model SV-9 nine-spindle drill; "Lumber industry and forestry" pavilion] Deviatishpindel'nyi sverlil'nyi stanok (model' SV-9); pavil'on "Lesnaia promyshlennost' i lesnoe khoziaistvo." [Moskva, 1957] folder (1 p.) (MIRA 11:11)

1. Moscow. Vsesoyuznaya promyshlennaya vystavka. (Drilling and boring machinery)

DOLGOV, A.I.; BAKST, A.S.; EPSHTEYN, T.G.

Machine tools for making doweled doors. Der. prom. 7 no.4:17-19 Ap '58. (MIRA 11:5)

1.TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki dereva. (Doors) (Woodworking machinery)

EPSHTEYN, T.G.; ZAGOSKINA, G.V., red.

[Automatic lines for the veneering of panel-type parts and particle board] Avtomaticheskie linii dlia fanerovaniia shchitovykh detalei i struzhechnykh plit. Moskva, TSentr. nauchno-iss . in-t informatsii i tekhniko-ekon. issl. po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoziaistvu, 1963. 39 p. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut derevoobrabatyvayushchego mashinostroyeniya (for Epshteyn).

KAPLAN, D.A.; EPSHTEYN, TS.A.; RUTSHTEYN, P.V.; TOROPOVA, M.N.

Viral etiology of multiple sclerosis. Zhur. nevr. i psikh. 64 no.3:368-369 '64. (MIRA 17:5)

1. TSentral'naya klinicheskaya psikhonevrologicheskaya i neyrokhirurgicheskaya bol'nitsa (nachal'nik V.M. Yushtin) Ministerstva putey soobshcheniya, Khar'kov.

EPSHTEYN, T.V. (Moskva 28, Astakhovskiy per., d. 1/2, kv.21)

Surgical methods in treating tuberculosis patients with pulmonary hemorrhages and recurrent hemoptysis. Grudn. khir. 5 no.3:60-64 My-Je '63 (MIRA 17:1)

1. Iz Moskovskoy gorodskoy klinicheskoy tuberkuleznoy bol'nitsy No.3 "Zakhar'ino" (nauchnyy rukovoditel' - prof. V.I. Struchkov, glavnyy vrach bol'nitsy V.P.Petrik).

EPSHTEYN, T.V.

Surgical methods of treating tuberculosis with lung hemorrhages and recurrent hemoptysis. Akt. vop. tub. no.2:190-200 '63.
(MIRA 17:9)

EPSHTEYN, T.V.; FRISHBERG, I.A.

Surgical treatment of pulmonary tuberculosis; a review of literature. Grud. khir. 6 no.2:104-110 Mr-Ap '64. (MIRA 18:4)

1. Moskovskaya gorodskaya tuberkuleznaya bol'nitsa No.3 "Zakhar'ino" (glavnyy vrach V.P.Petrik).

EFSHTEYN, T.V.

Indications to surgical treatment of tuberculosis patients with pulmonary hemorrhages and recurrent hemoptysis. Sov.med. 28 no.4:61-64 Ap '65. (MIRA 18:6)

1. 3-ya Moskovskaya klinicheskaya tuberkuleznaya bol'nitsa 'Zakhar'ino" (glavnyy vrach V.P.Petrik; nauchnyy rukovoditel' - prof. V.M.Struchkov).

BIRYUKOV, P., inzh.; DOTLIBOV, D., inzh.; EPSHTEYN, V., inzh.

Reinforced concrete three-dimensional bathrooms. Zhil. stroi. no.12:17-18 '61. (MIRA 15:2)

(Bathrooms)

(Dnepropetrovsk Province--Precast concrete construction)

BIRYUKOV, P., insh.; DOTLIBOV, A., insh.; EPSHTEYN, V., insh.

Mass production of reinforced concrete bathrooms. Zhil. stroi. no.12:21-22 '62. (MIRA 16:1)

(Dneprepetrovsk--Precast concrete) (Bathrooms)

EPSHTEYN, V., kand. tekhn. nauk

Practice of Yaroslavl's chemists. NTO 5 no.3:45 Mr '63.
(MIRA 16:4)

1. Predsedatel' Yaroslavskogo oblastnogo pravleniya Vsesoyuznogo khimicheskogo obshchestva imeni Mendeleyeva.
(Yaroslavl—Tires, Rubber)

ANSHIN, Z.L., inzhener; EPSHTEYN, V.A., inzhener.

Standard transformer substations for community transformer substations.
Prom.energ. 11 no.3:27-31 Mr '56. (MLRA 9:7)
(Electric substations)

ANSHIN, Z.L., inzh.; EPSHTEYN, V.A.

Standard 6-10 transformer substations. Prom. energ. 13 no.5:26-28 My '58. (MIRA 11:8)

1.Giprokommunenergo.
(Electric substations)

ROZENGART, Yu.I., dotsent, kand.tekhn.nauk; TAYTS, N.Yu., prof., doktor tekhn. nauk; EPSHTEYN, V.A., inzh.; LITOVCHENKO, Yu.K., inzh.; KHUDIK, V.T., inzh.; MININZON, R.D., inzh.

Study of nonoxidizing heating of alloy steels. Stal' 25 no.5:469-473 My '65. (MIRA 18:6)

1. Dnepropetrovskiy metallurgicheskiy institut i zavod "Dneprospetsstal'".

EPSHTEYN, V. B.

USSR/Chenistry - Vitamines

Card : 1/1 Pub. 116 - 12/20

Authors : Shakin, I. A., Gol'dberg, M. M. and Epshteyn, V. B.

Title : Stability of carotene in oily solutions

Periodical : Ukr. khim. zhur. 20, 408 - 410, 1954

Abstract : Various types of vegetable oils (refined sunflower oil, apricot oil, olive oil, and cottonseed oil) were investigated to determine their suitability as solvents during the synthesis of carotene compounds. The absolute losses of the carotene, dissolved in vegetable oils and the stability of this vitamin, were established. Three references: 1-USSR; 1-Ukrainian and 1-USA (1933-1948). Table; graphs.

Institution : UKRVITAMINPROM (Ukrainian Vitamin Industry), Central Chem. Laboratory.

Submitted : October 10, 1953

EPSHTEYN, V. D.

PHASE I BOOK EXPLOITATION SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th, Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii (Physicochemical Bases of Steel Making; Transactions of the Fifth Conference on the Physicochemical Bases of Steelmaking) Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted. 3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg. Tech. Ed.: V. V. Mikhaylova.

Card 1/16

Physicochemical Bases of (Cont.)

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

Physicochemical Bases of (Cont.)

EPSHTEYN, Valentina Grigor'yevna

[Rules for the Russian transcription of Burmese geographical names] Pravila russkoi transkriptsii birmanskikh geograficheskikh nazvanii. Moskva, Izd-vo vostochnoi lit-ry, 1959. (MIRA 13:10)
54 p.
(Burma--Names, Geographical)
(Burmese language--Transliteration into Russian)

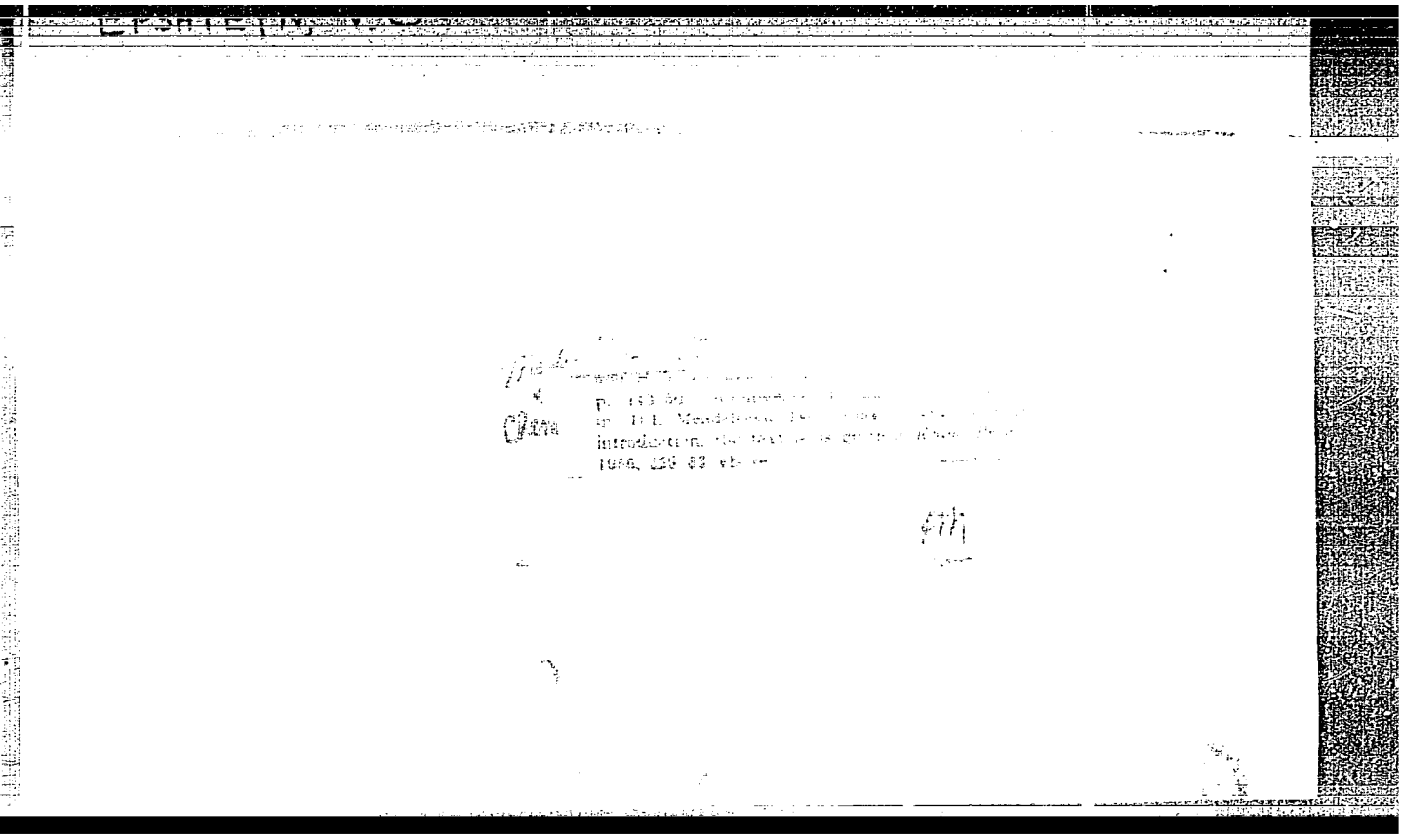
EPSHTEYN, V. G. Cand Tech Sci

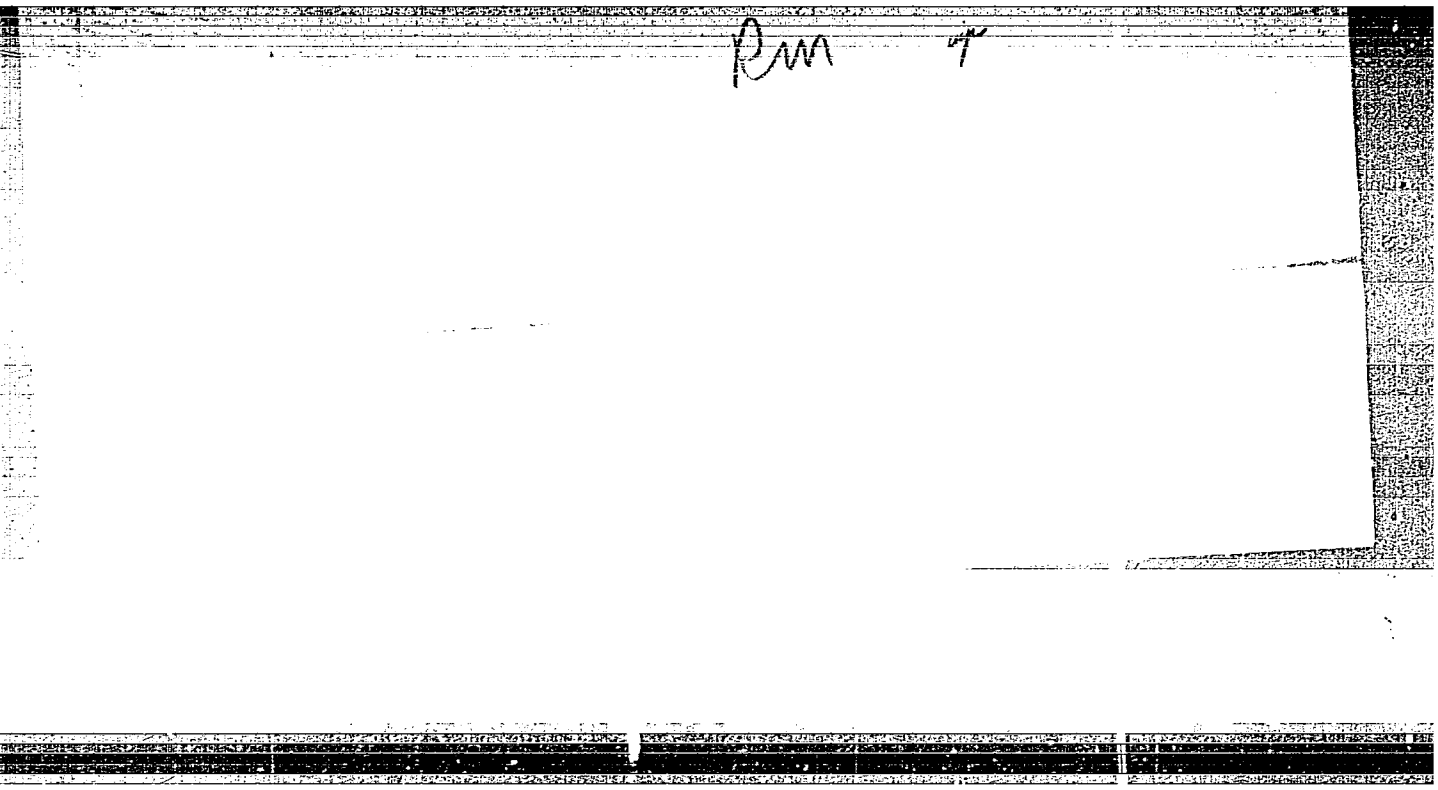
Dissertation: "Fatigue of the Vulcanizates of Various Kinds of Rubber in the Process of Repited Tension."

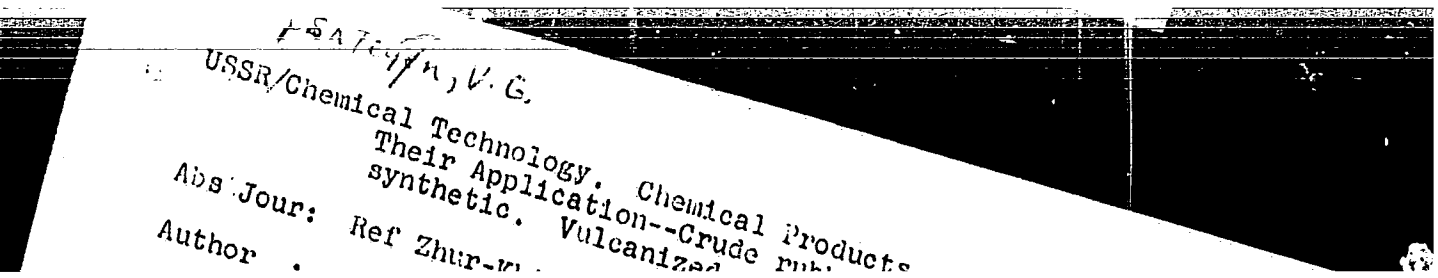
9/10/50

Moscow Inst of Fine Chemical Technology imeni Lomonosov.

SO Vecheryaya Moskva
Sum 71







USSR/Chemical Technology. Chemical Products
Their Application--Crude rub.
synthetic. Vulcanized

Abs Jour: Ref Zhur-K

Author

USSR/Chemical Technology. Chemical Products and Their Application--Crude rubbers, natural and synthetic. Vulcanized rubber I-22

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9785

Abstract: izates containing II than in vulcanizates containing I). The effect of I and II on the fatigue of rubbers during deformation tests in which equal amounts of energy are stored in the rubbers was found to be equal. II is more active in the fatigue of unfilled vulcanizates from SKB rubber. The resistance to aging of vulcanizates prepared from natural rubber increases as the amount of accelerator is increased and the amount of S is decreased. The resistance to aging depends on the duration of vulcanization. Revulcanization of the mixture with Captax leads to a sharp decrease in aging resistance; this effect is not observed in rubbers containing thiuram and DPG. In the presence of an accelerator the degree of homogeneity of the molecular structure of the vulcanizates is in-

Card 3/4

Epshteyn, V. G.

USSR/Chemical Technology. Chemical Products and Their Application--Crude rubber, natural and synthetic. Vulcanized rubber. I-22

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9782

Author : Epshteyn, V. G. and Golubeva, A. G.
Inst : Not given
Title : The Accelerating Action of the Salts of Primary Amines During the Vulcanization of Rubbers

Orig Pub: Uch. zap. yaroslavsk. tekhnol. in-ta, 1956, Vol 1, 175-186

Abstract: The monosubstituted salts of phthalic acid and primary aromatic amines (benzidine (I), p-anisidine [illegible] naphthalamines (III), and m-phenyl-

USSR/Chemical Technology. Chemical Products and Their Application--Crude rubber, natural and synthetic. Vulcanized rubber. I-22

Abs Jour: Ref Zhur-Khimiya, No 3, 1957 9782

Abstract: of electricity, can be expressed in the following decreasing series: IV-I-II-III. The addition of salts of II increases the tensile strength to 30-40 kg/cm^2; salts of III have no effect on the tensile strength. The tensile strength and elasticity of carbon black reinforced formulations based on natural rubber are improved by the addition of I and II; the latter have no effect on the elasticity and tensile strength of formulations in which fillers are not used, though the vulcanization temperature is raised. Salts of aromatic amines have no effect on SKB vulcanizates, their action being masked by the alkali. Amine salts in contrast to the free amines do not increase the tendency to premature vulcanization of mixtures of natural rubber and SKS-30A. The activating effect of the salts can

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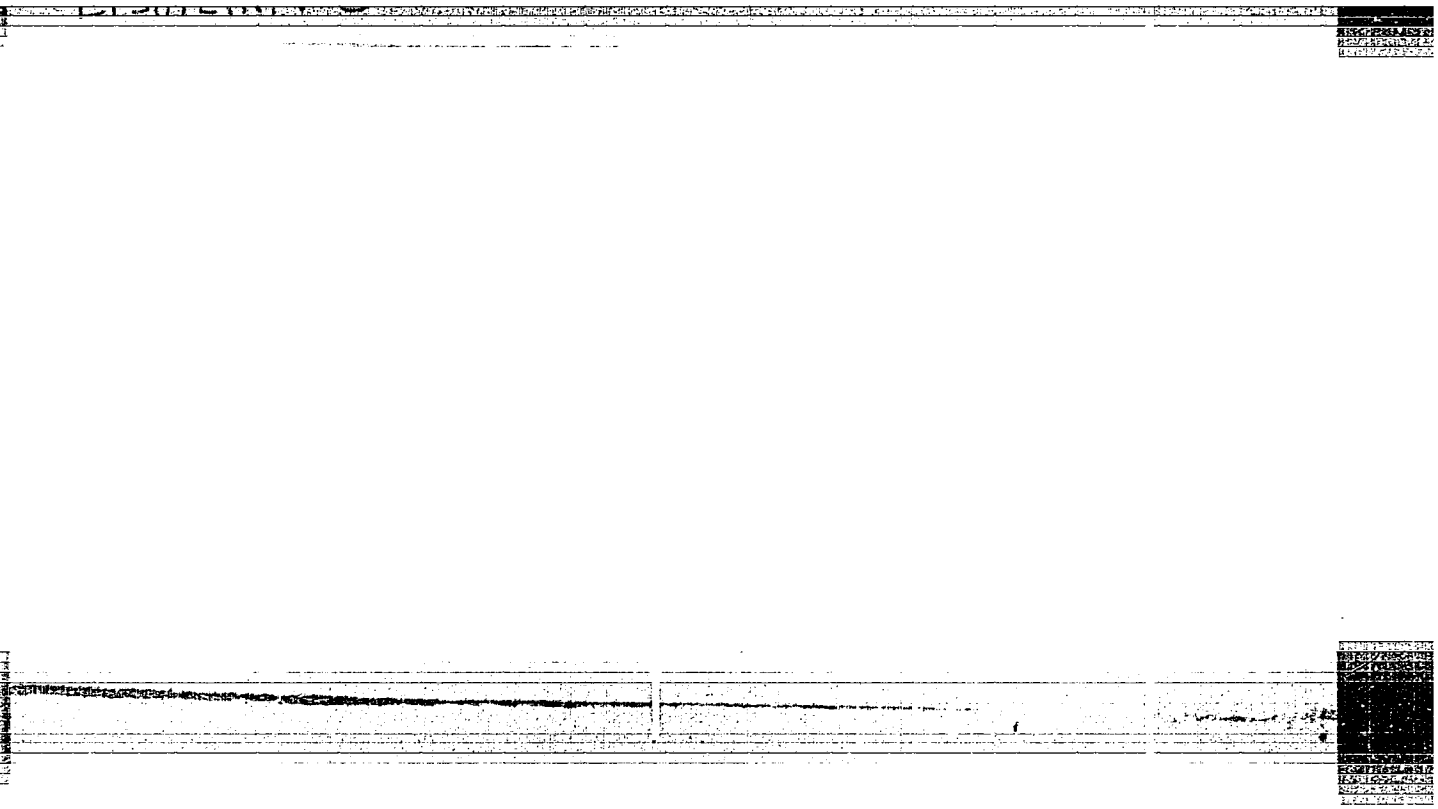

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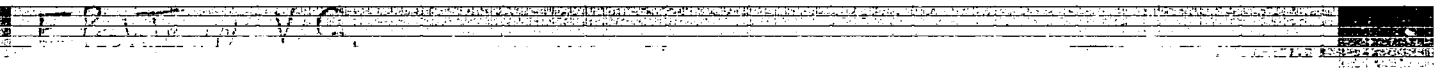

EPSHTEYN, V.G.; SHIRNOV, B.A.

Synthetic alkylphenolaldehyde resins as accelerators for rubber.
Uch.zap. IArosl.tekhnol.inst. 2:203-210 '57. (MIRA 12:7)
(Vulcanization) (Resins, Synthetic)

EPSHTEYN, V. G.

NUSINOV, M.D.; PAVLOV, V.P.; POZIN, A.A.; EPSHTEYN, V.G.; KUKHTENKOVA, T.I.

Mechanical properties of rubber mixtures and peculiarities of their flow through slit passages. Kauch. i rez. 16 no.8:24-27 Ag '57. (MIRA 10:11)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.
(Elastomers--Testing) (Rheology)

EPSHTEYN, V.G.; KHOLODKOVSKIY, B.N.; POLYAK, M.A.; BAKHAREV, A.I.

Triethanolamine derivatives as vulcanization accelerators.
Kauch. i rez. 16 no.11:15-21 N '57. (MIRA 11:2)
(Ethanol) (Vulcanization)

VASIL'YEVA, V.Ya., otv.red.; GUBER, A.A., otv.red.; UZYANOV, A.N., otv.red.; ZHABREYEV, A.F., red.; VASIL'YEV, V.F., red.; EPSHTEYN, Ya.G., red. karty; LIVSHITS, Ya.L., red.izd-va; FRENKEL', M.Yu., red.izd-va; PANAS'YANTS, M.D., red.izd-va; TSIGEL'MAN, L.T., tekhn.red.

[Union of Burma; a collection of articles] Birmanskii Soiuz; sbornik statei. Moskva, Izd-vo vostochnoi lit-ry, 1958. 291 p. (MIRA 12:2)

1. Akademiya nauk SSSR. Institut vostokovedeniya. 2. Nauchnyy sotrudnik Instituta vostokovedeniya (for Epshteyn). (Burma)

EPSHTEYN, V. G.

64-1-2/19

AUTHORS: Dogadkin, B. A. , Gul', V. Ye. , Epshteyn, V. G.

TITLE: The Influence of Swelling on the Production of Heat and the Fatigue Resistance of Vulcanized Rubber (Vliyaniye nabukhaniya na teploobrazovaniye i soprotivleniye utomleniyu vulkanizatov)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 1, pp. 5 - 11 (USSR)

ABSTRACT: In order to carry out investigations corresponding to the repeated deformation stresses of rubber tires and similar effects the influences on the reduction of the production of heat are investigated as well as the increase of the destruction resistance in repeated deformation processes. The latter can be expressed in time units (stability) or by the number of cycles. A demonstration model as well as the computation formula appertaining to it was developed by A. P. Aleksandrov for the better evaluation of the mechanical properties of vulcanizates. The penetration of a solvent into a polymer is bound to cause an energy change of the inter- and intramolecular forces, i. e. they also influence the

Card 1/3

The Influence of Swelling on the Production of Heat and the Fatigue Resistance of Vulcanized Rubber

production of heat in deformation stresses as well as the fatigue resistance. Swell experiments on a polymer based upon smoked sheets were carried out and it was found that a swelling in paraffin oil leads to a reduction of the production of deformation heat. Measurements of the coefficient of the mechanical losses in connection with the increase of the swelling degree were carried out by an apparatus according to Kornfel'd (reference 9). In experiments which were carried out by swelling of filled and unfilled natural rubber vulcanizates with paraffin oil and dibutylphthalate in a tester according to V. E. Gul' (references 7, 10) it was found that the fatigue resistance varies irregularly with the swelling degree. A decrease of the stability of the vulcanizate is observed in the case of more intensive swelling. The greater influence of dibutylphthalate (greater than that of Vaseline oil) is explained by the presence of polar and nonpolar domains. The necessity of the addition of a plasticizer to vulcanizates is determined in connection with the obtained investigation results. Investigations were carried out on the influence of mineral oil on the rubber properties

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The Influence of Swelling on the Production of Heat and the Fatigue Resistance of Vulcanized Rubber

in connection with the widely spread,of lately, "oil rubber" (a mixture of butydienestyrene rubber and mineral oils). Among other facts it was found that the addition of greater quantities of oil increases the fatigue resistance at normal and at increased temperatures. There are 11 figures, 3 tables, and 18 references, 16 of which are Slavic.

AVAILABLE: Library of Congress

1. Vulcanizates-Physical properties
2. Vulcanizates-Fatigue-Analysis
3. Vulcanizates-Temperature factors
4. Vulcanizates-Deformation-Test results

Card 3/3

5(1,3) SOV/153-58-4-21/22

AUTHORS: Prokof'yev, Ya. N., Epshteyn, V. G., Farberov, M. I.

TITLE: Styrene Butadiene Resins as Reinforcing Additions to Rubbers, and the Possible Reinforcing Mechanism (Stirol'no-butadiyenovyye smoly kak usilivayushchiye ingrediyenty dlya kauchukov i vozmozhnyy mekhanizm usileniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 128 - 137 (USSR)

ABSTRACT: Styrene butadiene resins are copolymers of styrene and butadiene, with styrene prevailing. They form a new class of the reinforcing agents of rubber mixtures. Abroad they are used as floor covering (linoleum substitute), rubber linings, electric insulation, ebonite etc. (Refs 1-3). A further use of these resins is that of main additions in high-quality shoe soles made of one piece, heels, and other products of synthetic leather (Refs 2-8). The properties of the resins depend on the ratio styrene: butadiene in the polymerization. A

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higher quantity of styrene increases the specific weight, the tensile strength, and decreases the relative expansion (Ref 8). The vulcanizates to which the resins in question are added become stronger, harder, higher resistant to friction and to repeated deformations. All these properties connected with the low specific weight andthe dyeability in any shade open great possibilities for these styrene butadiene resins in the imitation leather industry. In the experimental part, the production method (Refs 10-11) as well as polymerization recipe are mentioned (Table 1). The characterization of the resins in dependence on the styrene content is given in table 2. Based on their investigations the authors arrived at the following conclusions: 1) The styrene butadiene resins are the best for reinforcing vulcanizates of styrene and nitryl rubber: those of natural and sodium butadiene rubber are reinforced to a smaller extent. 2) With respect to several properties the said resins have the same effect as the

addition of active soot. They are better than soot with respect to the increase of the resistance to repeated deformation. This is of great importance in using these resins for the production of shoe soles and imitation leather. 3) The reinforcing by styrene butadiene resins is higher if they are added in the latex stage of the rubber. This difference in the physical and mechanical properties of the vulcanizates is greater the higher the content of the bound styrene in the resin is(if added in the latex stage and on the rolls). Resins containing 85-95% styrene have the best effect. Resins having less than 70% styrene do not cause any noticeable reinforcement. 5) The cause of the reinforcing effect probably is the intermolecular interaction of resins and rubbers. A high resistance to tearing and abrasion can be explained by a fibrous structure formed by complexes of rigid, expanded resin molecules; these molecules are arranged between the flexible rubber agglomerates. There are 6 figures, 5 tables, and 22 references, 10 of which are Soviet.

Styrene Butadiene Resins as Reinforcing Additions to Rubbers, and the Possible Reinforcing Mechanism SOV/153-58-4-21/22

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut i opytnyy zavod Ministerstva khimicheskoy promyshlennosti(Yaroslavl' Technological Institute and Experimental Plant of the Ministry of Chemical Industry) Kafedra tekhnologii osnovnogo organicheskogo sinteza i SK (Chair of Organic Basic Synthesis and Synthetic Rubber)

SUBMITTED: October 26, 1957

Card 4/4

82844
S/081/60/000/008/001/001
A006/A001

15.9220
Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 8, p. 544, # 33151

AUTHORS: Tsaylingol'd, V.L., Farberov, M.I., Epshteyn, V.G., Lazaryants, E.G., Boguslavskiy, D.B., Bugrova, G.A., Uzina, R.V.

TITLE: Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

PERIODICAL: Yaroslavsk. prom-st' (Sovnarkhoz Yaroslavsk, ekon. adm. r-na), 1958, No. 5, pp. 22-25

TEXT: Copolymers of butadiene and 2-methyl-5-vinyl pyridine (VPK) were obtained at 50 and 5°C polymerization temperature and studied. Resistance to wear and heat generation of VPK-vulcanized rubbers exceeds considerably that of vulcanized products from butadiene-styrene rubbers (SKS). Rubbers containing 10-15% 2-methyl-5-vinyl-pyridine have high quality characteristics. Impregnation of cords with VPK latexes ensures high adhesion strength of viscose and caprone cords with natural, SKB and SKS rubbers. Compared to standard SKS impregnation, VPK impregnation increases the adhesion strength of rubber and

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S/081/60/000/008/001/001
A006/A001

Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

cord by a factor of 1.5-2 under static conditions and much more under dynamic conditions. VPK, polymerized at 5°C exceeds the quality of analogous polymers obtained at 50°C.

O.T.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

EPSHTEYN, V.G.

SOV/81-59-19-69874

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 19, p 479 (USSR)

AUTHORS: Boguslavskiy, D.B., Galybin, G., Epshteyn, V.G.

TITLE: On the Problem of Producing Divinyl-Styrene Oil Rubbers

PERIODICAL: Yaroslavsk. prom-st' (Sovnarkhoz Yaroslavsk. ekon. adm. r-na), 1958, Nr 5, pp 25 - 29

ABSTRACT: The rubber mixtures made of SKS-ZOAM (non-regulated oil-filled polymer) have an increased shrinkage and an unsatisfactory adhesiveness due to sweating out of the oil; their vulcanized rubbers have inferior physical-chemical properties compared to the rubbers of SKS-ZOA, have a higher wear-resistance, but show a lower heat-formation. The filling with oils of rigid rubbers, like SKS-ZOAM needing thermo-mastication, lacks any technical foundation, because the thermo-masticated rubbers of the polymers of this type are enriched by a considerable quantity of low-molecular and high-molecular fractions negatively affecting the technological and technical properties of the rubbers. It is recommended to use

Card 1/2

On the Problem of Producing Divinyl-Styrene Oil Rubbers SOV/81-59-19-69874

rubbers on the base of regulated oil-filled polymers with an increased average molecular weight which need no thermo-mastication.

O. Timofeyeva

Card 2/2

SOV/138-58-7-11/19

AUTHORS: Epshteyn, V.G., Semenov, N.I., and Tikhomirov, B.P.

TITLE: The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres (Primeneniye sul'fita natriya dlya zashchity varochnykh kamer pri vulkanizatsii avtopokryshek)

PERIODICAL: Kauchuk i rezina, 1958, Nr 7, pp 36 - 37 (USSR)

ABSTRACT: During vulcanisation, in processes using curing bags, sulphur diffuses from the carcass rubber into the outer surface of the bag. The bag becomes partially vulcanised after a number of operations and cracks and becomes useless.
Grease is usually applied to the interior of the tyre and to the surface of the bag to assist the forming process and improve the finish of the tyre. The grease applied to the tyre is usually a solution based on butyl rubber and benzine and that applied to the bag is an aqueous solution.
Sodium sulphite reacts freely with free sulphur and if it is present at the interface between the tyre and the bag, it will absorb the sulphur as it migrates and prevent diffusion into the curing bag. In order to study that action of the sodium sulphite, a proportion of sulphur

Card1/3

The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres

isotope, S^{35}, was added to the carcass rubber mix and discs 3 mm thickness and 20 mm diameter made up from this mix. One such disc was then greased with the normal solution and another with a grease containing sodium sulphite. These discs were then put on top of similar-sized discs made from the rubber used for the curing bag and which had been treated with the normal water-based grease. The formula is given for this grease. The experimental grease contained 25 pbw of sodium sulphite to 100 pbw of K7 grease (100 pbw SKB rubber in 750 pbw benzine).

The specimens with the experimental grease and with normal grease were vulcanised under identical conditions. Table I shows the radioactive levels of the carcass rubber and of the curing-bag rubber after vulcanising for the two samples. The two lower rows of figures are for the Na_2SO_3 greased samples. In a further experiment, NA_2SO_3 was introduced into both the benzine-based grease

The Use of Sodium Sulphite for the Protection of Curing Bags Used in the Vulcanisation of Tyres

on the tyre and the water-based grease on the curing bag. The results of tests with similar samples are shown in Table 2. These indicate that the quantity of sulphur that has diffused from the carcass rubber into the curing bag is five times less when sodium sulphite greases are used, as compared with standard grease. The life of the curing bag will be increased due to the much slower rate of self-vulcanisation. There are 2 tables.

ASSOCIATION: Shinnyy zavod i Tekhnologicheskiy institut (Tire Factory and Technological Institute), Yaroslavl'

Card 3/3

1. Tires--Production 2. Vulcanization--Equipment
3. Sulphur--Absorption 4. Sodium sulfate--Performance

SOV/138-58-9-1/11

AUTHORS: Tsaylingol'd, V. L; Farberov, M. I; Enshteyn, V. G; Lazaryants, E. G. and Beguslavskiy, D. A.

TITLE: Low-Temperature Copolymers of 1.3-Butadiene with 2-Methyl-4-Vinylpyridine in Ordinary Rubbers (Preliminary Communication) (Nizkotemperaturnyye sopolimery butadiyena-1,3 s 2-metil-5-vinilpiridinom v kachestve kauchukov obshchego naznacheniya)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 1 - 4 (USSR)

ABSTRACT: Latexes based on these copolymers show better properties when used in the production of tyre cords (Ref.1) During investigations of these copolymers, and of some of their properties, the copolymers contained varying amounts of monomers; the polymerisation temperatures were 50° and 5°C. Low temperature polymerisation conditions were based on the oxidation-reduction system suggested by Dolgoplosk (Ref.4). The substance for use during polymerisation at 50°C was based on the composition given for rubber SKS-30. A 70% conversion of the monomers was attained after 10 - 12 hours. The unreacted monomers were distilled off after termination of the polymerisation and 2.5% of an aqueous dispersion of "Neczon "D" introduced into the latex. The latex coagulated, and the rubber was dried to 105°C. The composition

Card 1/3

Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-4-Vinyl-pyridine in Ordinary Rubbers

of two mixtures is given. These mixtures were vulcanised at 143°C and tested according to GOST 6074-51 (Ref.5). The physico-mechanical properties of rubbers obtained by hot and cold polymerisation are given in Tables 1 and 2. The characteristics of these copolymers and of styrene copolymers SKS-30 and SKS-30A were compared. The properties of both types of copolymers depend on the content of 2-methyl-5-vinylpyridine (Fig.1). Fig.2: the wear resistance of cold and hot copolymers when containing 10 - 15% 2-methyl-5-vinylpyridine. Data on the loss of plasticity during boiling in H_2O (at 100°C for 30 minutes) is given in Table 3. Copolymers of butadiene with 2-methyl-5-vinylpyridine show a 1.5 - 2-fold better wear resistance than butadiene-styrene rubber vulcanisates. There are 2 Figures, 3 Tables and

SOV/138-58-9-1/11

Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-5-Vinyl-pyridine in Ordinary Rubbers

5 References: 3 English and 2 Soviet.

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut i Yaroslavskiy shinnyy zavod (Yaroslavl' Technical Institute and the Yaroslavl' Tyre Factory)

Card 3/3

AUTHOR: V.G. Epshteyn SOV/138-58-12-11/17

TITLE: Scientific and Technical Conference of the D.I. Mendeleyev VKhO at Yaroslavl' (Nauchno-tekhnicheskaya konferentsiya VKhO im. D.I. Mendeleyeva v Yaroslavle)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 12, pp 32-33 (USSR)

ABSTRACT: 300 representatives from the rubber industry and research institutes connected with it attended this conference in May 1957 (sic). Among papers read were: Properties of SKI (Isoprene). Means of improving wear resistance of tyre tread rubber. The introduction of synthetic polycondensate resins in latex — some forms of polycondensate resins act as softeners in unvulcanized rubber, and as fortifiers in vulcanized material. The properties of methyl-vinyl-piridine rubbers with high bond strength and good wear resistance. Carboxyl and butadiene-methyl-vinyl-piridine latexes for very high bond strength between tyre cord and rubber. Oil-filled butadiene-styrol rubbers — disadvantages of 'avtol-18' as a filler — improvement with 22%-28% 'aroplast' (aromatic plasticizer) in new oil filled rubber designated SKS-30A. - high wear

Card 1/2

Scientific and Technical Conference of the D.I. Mendelyeev V.Kh.O. at Yaroslav

resistance as compared with other synthetic tyres. Use of zinc benzoate and other metallic substances to prevent pre-vulcanization (scorching). New ingredients, pore forming agents, and butadiene styrol rubbers for rubber soles with good elasticity and density of 0.2 - 0.3. Use of high frequency heating in tyre production. Preparation of natural rubber mixes combining plastification and mixing in one process. Use of pneumatic contactless thickness gauges in automatic calendering plant. It was proposed to hold these conferences annually at various centres of the rubber industry such as Omsk, Sverdlovsk, Voronezh, Yaroslavl and Leningrad.

S/081/60/000/020/013/014
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 20, pp. 544 - 545,
83245

AUTHORS: Abramova, Ye.N., Epshteyn, V.G.

TITLE: Causes of Roughness Appearing on the Surface of Raw Latex Gels During Their Processing by a Mixture of Benzine and Acetic Acid

PERIODICAL: Tr, N.-i. in-ta rezin i lateksn. izdeliy, 1959, No. 2, pp. 114-120

TEXT: Raw gel obtained from natural scorched latex (revultex) by the method of ionic precipitation to produce roughness, was subjected to the effect of a mixture composed (in weight portions) of : "rubber" benzine 100; icy acetic acid 3, ethyl alcohol 3. The roughness obtained was visually evaluated by the five point system. Satisfactory uniform roughness of raw gel was obtained at high concentrations of revultex and a viscosity of 48 centipoise. The greater the density of gel (in the course of syneresis) the weaker appears the roughness. Therefore high-speed synerizing gels from synthetic latexes A-4 (L-4) nairit-el and CKH-40 (SKN-40) do not yield satisfactory roughness. The quality of the roughness depends

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S/081/60/000/020/013/014
A006/A001

Causes of Roughness Appearing on the Surface of Raw Latex Gels During Their Processing by a Mixture of Benzine and Acetic Acid

only on the latex concentration. Extended holding in the mixture affects only swelling of the gel; this can in some cases entail disintegration of the gel. Each individual component of the mixture does not cause roughness, separately. Roughness appearing on the raw gel is due to the combined effect of acetic acid and alcohol which rapidly expose on the surface the caoutchouc content of globules coated with a protective substance. Benzine causes surface swelling of the gel forming the rough surface.

I. Pil'mershteyn

Translator's note. This is the full translation of the origina. Russian abstract.

Card 2/2

SOV/156-59-2-39/48

5(3),15(8)

AUTHORS: Vinitskiy, L. Ye., Epshteyn, V. G., Babitskiy, B. L.

TITLE: Derivatives of the Ethanolamines as Accelerators in the Vulcanization of Natural Rubber (Proizvodnyye etanolaminov kak uskoriteli vulkanizatsii natural'nogo kauchuka)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 372-375 (USSR)

ABSTRACT: Mono- and diethanolamine in various molecular proportions were brought into reaction with phthalacidanhydride. In table 1 the probable chemical formulae, the molecular proportions, and the specific weights are shown for the obtained compounds "monoetal" (neutral phthalacidic salt of the monoethanolamine), "monokietal" (acidic salt of the same compound), "dietal" (neutral phthal- acidic salt of the diethanolamine) and "dikietal" (acidic salt of the same compound). The reaction of these compounds as accelerators for the vulcanization was investigated; the vulcanized products were tested with regard to their mechanical properties (Table 2; Figs 1-4). The values determined correspond to the standards, so that the diphenylguanidine, which at present is used as accelerator for the vulcanization and is short in supply, could easily be substituted by the

Card 1/2

Derivatives of the Ethanolamines as Accelerators in the Vulcanization of Natural Rubber SOV/156-59-2-39/48

described substances. There are 2 figures, 4 tables, and 2 Soviet references.

PRESENTED BY: Kafedra khimii Vsesoyuznogo zaochnogo inzhenernostroitel'nogo instituta (Chair of Chemistry, All-Union Correspondence-Building Institute)

SUBMITTED: October 6, 1958

Card 2/2

SOV/138-59-3-2/16

AUTHORS: Tsaylingol'd, V.L., Farberov, M.I., Epshteyn, V.G., Uzina, R.V., Peyzner, A.B., Boguslavskiy, D.B., Bugrova, G.A., Basin, V. Ye. and Shmurak, I.L.

TITLE: Preparation of Latexes Obtained by the Copolymerisation of Butadiene and 2-Methyl-5-Vinylpyridine, and Their Use for Impregnating Tyre Cords (Polucheniye lateksov sopolimerizatsiyey butadiyena s 2-metil-5-vinilpiridinom i primeneniye ikh dlya propitki shinnogo korda)

PERIODICAL: Kauchuk i rezina, 1959, Nr 3, pp 6 - 9 (USSR)

ABSTRACT: The addition of copolymers of butadiene and 2-methyl-5-vinylpyridine, and also of tripolymers consisting of butadiene-styrene, and 2-methyl-5-vinylpyridine, increases the bond strength between the rubber and the cord by 80 to 100% (Ref 5 - 8). The copolymerisation of butadiene and 2-methyl-5-vinylpyridine was investigated and the obtained latexes were evaluated as impregnating agents. The two compounds were copolymerised at 5° and 50°C. In both tests salts of synthetic fatty acids were used as emulsifiers and "Leukanol" was added as stabiliser. Potassium persulphate was used as polymerisation initiator and 0.01 to 0.005 weight/volume of Trilon B when the

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Preparation of Latexes Obtained by the Copolymerisation of Butadiene and 2-Methyl-5-Vinylpyridine, and Their Use for Impregnating Tyre Cords

process was carried out at 50°C (isopropylbenzene hydroperoxide was used when the copolymerisation proceeded at 5°C). Furthermore, 0.001% methyl-p-aminophenol was added as polymerisation inhibitor. Results in Table 1 indicate that the addition of the inhibitor does not affect the rate of copolymerisation. The reaction was allowed to proceed (at both process temperatures) until a 75 to 80% conversion was reached after 8 to 12 hours (Figure 1). The unreacted monomers were separated from the latex by vacuum distillation and 2% of Neozone D added to the prepared latex. The effect of the addition of Diproxid (diisopropyl xanthogen disulphide) on the hardness of the copolymer was tested (Figure 2). Both types of the latex showed good mechanical properties. The latex was

 further used for impregnating viscose and polyamide cords

Preparation of Latexes Obtained by the Copolymerisation of Butadiene and 2-Methyl-5-Vinylpyridine, and Their Use for Impregnating Tyre Cords

in conjunction with rubbers based on natural, butadiene (SKB) and with butadiene-styrene (SKS-30AM) rubbers. The quantity of 2-methyl-5-vinylpyridine contained in the latex affects the bond strength between the viscose cord and the rubbers (Figure 3). Optimum strength of the bond is achieved when resorcinol formaldehyde resins are added to the copolymer (Figure 4). Improved physical and mechanical properties of the adhesive films result when 10% by weight of 2-methyl-5-vinylpyridine are added (Table 2). The effect of various quantities of resorcinol-formaldehyde resins on the strength of bonding between the cord and the rubber was investigated (Figures 5a, δ and β). Changes in the plasticity of the polymer affect the physical and mechanical properties of the adhesive film and the bonding between the cord and the rubbers. Results of relevant experiments are shown in Figure 6. The physical and mechanical properties of the adhesive are improved and the strength of bonding is increased when lowering the polymerisation temperature (Table 3).

Preparation of Latexes Obtained by the Copolymerisation of Butadiene and 2-Methyl-5-Vinylpyridine, and Their Use for Impregnating Tyre Cords

Table 4 gives the data on the strength of bonding of the viscose cord with various tyre rubbers. The strength of bonding was particularly satisfactory when natural rubber was used and when the latexes were polymerised at 5°C.

There are 7 figures, 4 tables and 10 references of which 8 are English and 2 Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya SK; Nauchno-issledovatel'skiy institut shinnoy promyshlennosti; Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka; Yaroslavskiy shinnyy zavod (Research Institute for Monomers for the use in Synthetic Rubber; Research Institute for the Tyre Industry; All-Union Research Institute for Synthetic Rubber; Yaroslavl' Tyre Factory)

S/081/60/000/007/011/012
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 7, p. 578, # 29081

AUTHORS: Epshteyn, V. G., Suchkova, M. G.

TITLE: The Structure of Rubbers and Their Adhesiveness

PERIODICAL: Uch. zap. Yaroslavsk. tekhnol. in-ta, 1959, Vol. 3, pp. 169-175

TEXT: An investigation was made into the effect on the adhesiveness of rubbers, of the difference in their structure, the length of molecular chains, the crystallization ability, the branching of molecules, and the increase in the number of phenyl groups. The adhesiveness was estimated from the adhesion force, which was determined by the load required to shift relative to one other the fabric strips saturated with rubber solutions and glued together. When glueing SKB rubber to butadiene-styrene rubber, containing different amounts of styrene (10, 30 and 50%), the adhesiveness decreases consecutively with increasing styrene residues. The adhesiveness passes through a maximum with a subsequent considerable decrease with the reduction of the molecule length of masticated natural rubber. The presence of the maximum is due to the existence of a reticular structure of unmasticated rubber, preventing the mutual diffusion

Card 1/2

The Structure of Rubbers and Their Adhesiveness

of molecules. Higher adhesive force at an increased softness of the rubber is, in the opinion of the authors, explained by an easier attaining of the "molecular contact". Adhesiveness of crystallizing rubbers is by one order higher as compared to adhesiveness of non-crystallizing CKB (SKB) or CKC-30 (SKS-30) rubbers. This difference disappears at higher temperature, obviously due to the melting of crystallites. The effect of branching of macromolecules on adhesiveness was studied using various SKS-30 specimens: cold masticated, thermo-masticated and remasticated rubbers. Adhesiveness is higher for more branched polymers for all values of viscosity. Increased branching of molecules by "remastication" or using structurizing agents (amines) can be a technical means of obtaining glues on synthetic rubber base having the same quality as natural rubber glues. Adhesiveness of rubbers depends not only on the flexibility of their molecules, but also on the fastening of the molecule sections in the layers to be jointed. The method used of determining adhesiveness can be considered as a means for the qualitative determination of the compatibility of rubbers to be glued.

V. Vakula

Translator's note: This is the full translation of the original Russian abstract.

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A006/A001

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15.9300 also 2209

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 14, pp. 620 - 621, # 59670

AUTHORS: Epshteyn, V.G., Lyubeznikov, V.K., Tret'yakov, V.G., Kamakina, L.T.

TITLE: The Application of Synthetic Resins as Strengtheners of Rubber Mixtures

PERIODICAL: Uch. zap. Yaroslavsk. tekhnol. in-ta, 1959, Vol. 3, pp. 179-199

TEXT: The authors studied the properties of mixtures of butadienestyrene rubbers with resorcin-formaldehyde (I) and anilin-formaldehyde (II) resins. I was introduced to СКС-30 (SKS-30) latex (Defo number 3000, 4.7% Nekal content) and СКС-30 АР latex (SKS-30 AR) (Defo number 500, 6.9% Nekal content). II was added to СКС-25-К (SKS-25-K) acid latex (Defo number 3700, 7.2% esteramine content, 3.5 pH). The mixtures of latex with resin were coagulated or allowed to gelate and dried. Rubber mixtures were prepared on rollers. The specimens were vulcanized at 143°C for 80, 100 and 120 minutes and their physical and chemical properties were determined. Vulcanized rubber with 15 weight portions of I and 43 weight portions of II per 100 weight portions of rubber were highly

The Application of Synthetic Resins as Strengtheners of Rubber Mixtures

resistant to rupture, tearing and wear. Moreover, II imparts high elasticity to the vulcanized rubber. If the dosage of I is increased to 30 weight portions and that of II to 80 weight portions, the hardness of raw mixtures and vulcanized rubbers increased. The aging time of I until the mixing with latex (up to 24 hours) does not affect the properties of strengthened vulcanized rubbers. If the aging time in the mixture with latex is raised to 96 hours the strength of the vulcanized rubbers is enhanced. Changes in the proportion of resorcin and HCOH in I do not affect the properties of vulcanized rubbers obtained by coagulation. A higher amount of HCOH and temperatures raised to 80°C reduce gelation time. The replacement of resorcin in I by phenol reduces resistance to rupture, tear and the moduli of the vulcanized rubbers. The addition of ≥ 10% urotropin to I accelerates the gelation process and causes higher strength. The addition of carbon black (30 weight portions per 100 weight portions of rubber) to the mixture of I with SKS-30 AR produces mixtures with exclusively high strength and wear resistance. A slight relaxation of stress and the constancy of the modulus at a temperature raised to 70°C prove the minor part of intermolecular interaction in strengthening resins with I.

I. Farberova

Translator's note: This is the full translation of the original Russian abstract.

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5(3)

AUTHORS: Epshteyn, V.G., Babitskiy, B.L., Vinitskiy, L.Ye.

TITLE: The Accelerating Action of Ethanolamine Derivatives on the Process of Rubber Vulcanization

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr, 3 pp 410-411 (USSR)

ABSTRACT: Mono- and diethanolamines with mercaptobenzothiazol and phthalic anhydride as vulcanization activators are studied here. The derivatives of phthalic anhydride and ethanolamine are easily dissolved in water, but the activators of the composition: monoethanolamine-captax and diethanolamine-captax are decomposed by water. Monoethanolamine-captax is the most efficient activator; it is cheap and available in large quantities. The salts of the orthophthalic acid with mono- and diethanolamine are activators, the activity of which is increased in combination with captax. The mentioned activators may easily be prepared in every rubber plant.
There are 2 graphs, 2 tables and 5 references, 4 of which are Soviet and 1 English.

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'The Accelerating Action of Ethanolamine Derivatives on the Process of Rubber Vulcanization

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut (Yaroslavl' Technological Institute)

SUBMITTED: July 2, 1958

Card 2/2

EPSHTEYN, V.G.

Carbon black structure and the ear resistance of vulcanizates.
Kauch. i rez. 18 no.1:27-30 Ja '59. (MIRA 12:1)

1.Yaroslavskiy tekhnologicheskiy institut.
(Rubber--Testing) (Carbon black)